

current general practitioners of these patients were identified by reference to the computer held Community Health Index in Ayrshire and Arran Health Board. Questionnaires were then sent to these general practitioners to ascertain the reason for admission in Greater Glasgow Health Board.

In all, 222 patients were admitted for 269 operations to 11 hospitals in Greater Glasgow Health Board. Most of the operations (203) were orthopaedic. Sixteen patients died and were not followed up. Replies from general practitioners were obtained for 203 (99%) of 206 patients. In 23 cases (11%) case notes could not be found by the general practitioner. Of the remaining 180 admissions, only 84 (47%) were the result of a referral by a general practitioner in Ayrshire and Arran Health Board. Nearly a third (55 (31%)) of the patients were referred by a hospital consultant, 7% were emergency admissions, 7% were referred by the patient's previous general practitioner in Greater Glasgow Health Board, 6% were patients receiving long term follow up from a Glasgow clinic, and 3% were not known. Of the 84 referred by general practitioners in Ayrshire and Arran Health Board, 40 (48%) were referred because of patient preference. Mapping of the data did not show any geographical pattern, but for 10 out of 40 patients the general practitioner (unprompted) mentioned that the patients wanted a second opinion. For 18 (21%) patients the general practitioner said that facilities were not available locally; for only six (7%) did the general practitioner claim the cross boundary admission was because of a special relationship with the consultant.

This small study has shown that the reasons why patients may be admitted to hospitals in another health authority vary greatly, and we need to take great care in making assumptions about the feasibility or costs and benefits of establishing new services.

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- 1 Coulter A, Noone A, Goldacre M. General practitioners' referrals to specialist outpatient clinics. II. Locations of specialist outpatient clinics to which general practitioners refer patients. *Br Med J* 1989;299:306-8. (29 July.)
- 2 Scottish Home and Health Department. *Scottish health authorities revenue equalisation*. London: HMSO, 1977.

## Homoeopathic treatment and fibrositis

SIR,—Dr Peter Fisher and colleagues<sup>1</sup> criticised our study of *Rhus toxicodendron* 6x in the treatment of osteoarthritis, comparing homoeopathic and allopathic treatment.<sup>2</sup>

We took considerable advice before we embarked on our study; it was a two centre study combining a group of patients in which the intention was to treat with an allopathic medication and a second group in which the intention was to treat homoeopathically. We used a double dummy technique incorporating a crossover design with placebo. All patients received each of the three treatments randomly allocated. The numbers of patients were sufficient to satisfy our statisticians.

The results showed a clear significance in favour of the non-steroidal anti-inflammatory drug used and that the homoeopathic treatment was clearly different from the placebo in that five patients experienced worsening of their symptoms. This is a feature suggestive of activity with a homoeopathic preparation in that it may at one concentration be highly effective and at a different concentration cause the very problem that it purports to treat. Dr Fisher and colleagues are therefore unreasonable to suggest that our failure

to show a response was a failure in the design of the trial.

Dr Fisher and colleagues' study is open to comment on several grounds. Firstly, we would argue that the fibromyalgia syndrome is an entity with a very variable course and that patients with it are not an ideal study group (an American Rheumatism Association group is trying to define exactly what the syndrome comprises). The data are hard to interpret as all that are given are some changes and not baseline data. It seems that the only positive gain from the active homoeopathic remedy was a reduction in the number of trigger points. This seems to beg the issue whether the treatment relieves pain. Dr Fisher and colleagues therefore seem not to have proved that this homoeopathic remedy is active, and the way is still open for further research.

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- 2 Shipley M, Berry H, Brosner C, Jenkins M, Clover A, Williams I. Controlled trial of homoeopathic treatment of osteoarthritis. *Lancet* 1983;i:97-8.

## Role of the general practitioner in managing patients with myocardial infarction

SIR,—The British Heart Foundation Working Group have appropriately highlighted several deficiencies in the early management of acute myocardial infarction in relation to the use of thrombolytic treatment.<sup>1</sup> In particular, we support the view that urgent attention should be directed towards reducing the delay in admission to coronary care units. We have recently reported a relatively simple way of doing this by installing a telephone line to the unit that bypasses the hospital switchboard.<sup>2</sup> This telephone number has been circulated among general practitioners, allowing them to inform the coronary care unit staff of an admission. The ambulance personnel are also aware of this method of direct admission, which bypasses the accident and emergency department. We have achieved a mean reduction in the delay of admission of patients to the coronary care unit of 51 minutes compared with patients admitted through the accident and emergency department ( $p<0.001$ ). There has also been a significant increase in the number of patients receiving thrombolytic treatment with this policy.

We have not encountered any appreciable problems with congestion in the coronary care unit or difficulties in transferring patients at an early stage to the general medical wards if required. After an initial period of variable usage the direct telephone link method is now used uniformly by our general practitioners for patients with suspected myocardial infarction. We believe that this relatively simple and inexpensive way of reducing time delay should be implemented by coronary care units and that this will increase the number of patients suitable for and likely to benefit from thrombolytic treatment.

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## Good clinical practice: a way to better drugs

SIR,—The leader by Professor E F Hvidberg rightly informs clinical investigators that European codes for good clinical practice are going to play a major role in drug regulation very soon.<sup>1</sup> The generally positive tone of the article should encourage European clinicians to embrace good clinical practice standards.

It would be wrong to suggest, however, that good clinical practice will not increase bureaucracy. Good clinical practice procedures are closely associated with increased supervision and documentation of clinical trials. Although the pharmaceutical industry has been moving towards good clinical practice standards, there will still be a need for close liaison and support between the industry and clinicians so that good clinical practice becomes accepted as necessary for clinical research. In the long run it would be expected that the quality of drug research will improve.

The improvements of good clinical practice procedures increase the time necessary for undertaking clinical research and must necessarily be associated with increased costs to the pharmaceutical company and also to the clinicians involved. Some of these increased costs for the pharmaceutical industry will, however, be recouped from fewer wasted studies consequent on a more focused and international clinical research programme for a new drug.

Professor Hvidberg rightly emphasises that good clinical practice should prevent, or at least detect, bungling or fraud. Increased audit of clinical trials is likely to highlight further cases of fraudulent data. The pharmaceutical industry and the medical profession need to address the question of how to handle such fraud and the doctors who perpetrate it.

We welcome the increasing pressure for good clinical practice in drug research and feel that it will, in the long term, provide benefits to patients, clinicians, and the pharmaceutical industry. As with any means of improving quality there is likely to be an initial somewhat traumatic period of each adjustment as the need for new standards becomes accepted.

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## Death after flumazenil

SIR,—I agree with Dr Andrew R Bodenham<sup>1</sup> that the availability of flumazenil must not cloud the necessity for close monitoring and early intervention in cases of benzodiazepine induced respiratory depression. The following case report of a patient seen in my department at necropsy emphasises this point.

An 83 year old woman weighing 86 kg presented with a three week history of diarrhoea and nausea. On admission her blood pressure was 140/80 mm Hg and her pulse 110 beats/min. Her haemoglobin concentration was 60 g/l and there was an iron deficiency picture. Four units of blood were transfused over 24 hours. On day 12 she underwent flexible oesophagogastrroduodenoscopy. For this she was sedated intravenously with 4 mg midazolam. During the procedure, which revealed gastritis, she lost consciousness and went into respiratory arrest. She was ventilated with a bag and mask and given an intravenous bolus of 3.5 ml flumazenil (100 g/ml). This was followed